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L'étude vise à évaluer, au niveau de la quatrième année, la valeur d'un programme enrichi de français langue seconde (75 minutes d'enseignement en français par jour) mis en place à l'école Westmount Park. Il s'agit de comparer les habiletés en anglais, en français et en mathématiques d'élèves inscrits à ce programme depuis la maternelle ou la première année par rapport aux habiletés d'élèves de groupes témoins francophone et anglophone ainsi que d'élèves inscrits dans un programme d'immersion française depuis la maternelle ou la première année.

Au total, 86 élèves de huit écoles de la région de Montréal ont participé à l'enquête: 24 élèves de Westmount Park, 19 élèves du programme d'immersion, 24 élèves du groupe témoin anglophone et 19 du groupe témoin francophone. Les tests ont été administrés en mai-juin 1975 au groupe de Westmount Park, en mai-juin 1974 à tous les autres groupes. Les instruments suivants étaient utilisés: trois sections du "Metropolitan achievement test" et un exercice de composition anglaise, les Tests de rendement en français et en mathématiques de la CECM ainsi que des tests de lecture, de compréhension auditive et de production orale en français.

Alors que le groupe de Westmount Park démontre les mêmes habiletés que les autres groupes anglophones en anglais, ses résultats sont significativement plus faibles en mathématiques et ils se comparent à ceux des élèves anglophones suivant les cours réguliers pour ce qui est de l'enseignement du français. Pendant ce temps, les élèves du groupe d'immersion, sans que leurs autres résultats en souffrent, atteignaient des résultats en français comparables à ceux du groupe francophone. Il ne semble donc pas que les élèves de Westmount Park aient retiré quelque bénéfice que ce soit de leur participation à un programme enrichi de

français.

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Comparative Evaluation of the Westmount Park French Program, the Early French Immersion Program and the F.S.L. Program at the Grade 4 level.

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A report submitted by the Curriculum Department
to
The Protestant School Board of Greater Montreal
November 1975

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This report presents the results of an evaluation of the Westmount Park French program at the grade 4 level. This program, in contrast to the regular program of French language instruction, might be called an "enriched" French program. It has existed since 1972, and is offered to all students in grades 1 to 6 (see Appendix A for a summary of the class sizes). In 1975-76, there was one English Kindergarten, with approximately 15 minutes per day of French, and one French kindergarten with all activities presented in French. There is no optional regular or immersion program in the school beyond K.

Generally speaking, the students receive approximately 75 minutes a day of French instruction. The exact scheduling and nature of the French classes varies somewhat from year to year owing, in part at least, to changes in teaching personnel. For example, in 1974-75, grades 1 to 6 (whole classes) spent 60 minutes daily with a French Specialist plus 15 minutes daily in French with the classroom teacher. In 1975-76, however, French Specialists are teaching <u>whole</u> classes for 60 minutes twice weekly, <u>half</u> classes for 30 minutes thrice weekly, and small groups of children new to Quebec for 30 minutes twice weekly. In addition, every Wednesday is "un jour Français" when all teachers are encouraged to use common classroom expressions in French in their classes.

Although the initial intent of the program was to allocate part of the program to teaching French as a second language (FSL) and part of the time to teaching subject matter in French, the former has proven more successful so that most of the time is now devoted to FSL. The extended time for French, however, allows for greater variety in teaching French as a second language

than in the regular program. For the most part, all French teachers are native-French speakers.

In the current study, we evaluated the students in grade 4 of the Westmount Park program on a battery of English and French language tests. Their performance on these tests was compared to that of comparable grade 4 students following the regular English program with FSL and of students in the early French immersion program. The latter two groups had taken the tests one year earlier, in June 1974, as part of our evaluation of the grade 4 French immersion class (see Genesee, Morin & Allister, 1974, for the results of this evaluation).

THE SAMPLE

Four groups of students participated in the evaluation:

1) students in grade 4 of the early immersion program (Immersion);
2) students in grade 4 of the Westmount Park French program (Westmount Park);
3) students in grade 4 of the regular English program with French-as-a-second language (English Control); and
4) French-speaking students in grade 4 of a regular French program in the P.S.B.G.M. (French Control).

The specific schools from which these students were selected are listed in Table 1A. In the case of the students in groups 1), 3) and 4) above, they were the same students as were evaluated in 1973-74 (see Genesee, Morin

& Allister, 1974). In the 1973-74 grade 4 evaluation above average, average and below average students were tested. In the current evaluation, we were able to select only "average" students (full-scale I.Q. between 96 and 115) from the Westmount Park program. We, therefore, included the test results of only the average students in the Immersion, English Control and French Control groups of the 1973-74 evaluation. The exact sample sizes are presented in Table 1B according to language program and sex.

The students in the Westmount Park sample started the program in kindergarten or grade 1; no student in grade 4 at Westmount Park who had started the program in grade 2 or later was included. The students in the Immersion group had been in that program since Kindergarten.

As mentioned previously, the evaluation of the Immersion, English Control and French Control groups was carried out in May/June 1974; the evaluation of the Westmount Park group took place in May/June 1975, one year later.

TEST BATTERY

Two types of tests were administered;

1) English language tests, and 2) French language tests. The Immersion, Westmount Park and English Control groups took both kinds of tests while the French Control group took only the French language tests.

TABLE 1

(A)

SCHOOLS

IMMERSION	ENGLISH CONTROL	FRENCH CONTROL
Edinburgh	Edinburgh	
Meadowbrook	Willingdon	
Willingdon	Meadowbrook	Peace Centennial

(B)

SAMPLE SIZES

	IMMERSION	WESTMOUNT PARK	ENGLISH CONTROL	FRENCH CONTROL
BOYS	7	13	12	9
GIRLS	12	11	12	10
I.Q. (boys & girls)	108	102	106	105

English Language Tests

1) Reading: The Reading subtest of the Metropolitan Achievement Test, M.A.T. Elementary, Form F, (1970) was administered. This is a timed, group test. The test consists of eight prose passages with multiple-choice questions related to each. Raw scores were converted to standard score form for statistical analysis.

2) Word Knowledge: The Word Knowledge subtest of the M.A.T. was administered. Again, this is a timed, group test. The test consists of 50 items. Each item consists of a sentence stem, such as "Night is the opposite of....", which the child completes by selecting one of the four choices, in this example: "dawn", "cool", "day" or "camp". Again, the raw scores were converted to standard score form for statistical analysis.

3) Mathematics: The Arithmetic Problem Solving and Concepts subtest of the M.A.T. was administered. Again, this is a timed, group test. It consists of 40 multiple-choice items which test conceptual skills in mathematics as well as some computational skills. Standard scores were analyzed.

4) Writing: Each student was asked to write a composition by completing one of three introductory sentences presented to him. The choice of topic sentence was left entirely to the student. The students were given approximately 45 minutes to complete the composition.

Each composition was later marked independently by two grade 4 teachers from the P.S.B.G.M. along 9 scales - - 1) spelling, 2) sentence accuracy, 3) sentence complexity & variety, 4) organization, 5) originality, 6) overall, 7) length, 8) vocabulary, and 9) punctuation. On the first 6 scales, the

ratings ranged from 5, indicating excellent performance for a grade 4 student, to 1, indicating totally inadequate performance for a grade 4 student. A rating of 3 indicates a level of performance to be expected of a grade 4 student. There were only two response categories for the length and punctuation scales - - "appropriate" and "inappropriate". There were three categories for the vocabulary scale - - "superior", "average", and "below average". The teachers were not told the school or I.Q. group of each student. The Immersion and English Control compositions were scored in a random order. The Westmount Park compositions, which were scored one year later, were scored as a group, but the raters were not told the nature of the group. The same raters were used to score the Westmount Park compositions as had scored the Immersion and English Control ones.

French Language Tests

1) Reading: A modified version of the Test de Lecture "California" was administered. This is a group test developed for use with the native-French speaking children. It consists of five subtests: discrimination visuelle, antonymes, synonymes, directive à suivre and interprétation des textes. The discrimination visuelle section requires the child to decide whether two words, presented side by side, are the same word or different words. As their names imply the antonymes and synonymes sections ask the child to select one of four alternatives which means the opposite of or the same as, respectively, a target word. Since the first three subtests all deal with word skills, the scores for the three subtests were combined to form one score - - vocabulaire. The maximum possible score on these three sections combined is 52. The directives à suivre section consists

of 10 items each requiring the student to follow an instruction (e.g. Ecrivez la troisième lettre du dernier mot de cette phrase).
The interpretations des textes section consists of two prose passages with multiple-choice questions. Since the last two sections deal with comprehension of prose, the scores for these sections were combined to form one score - - compréhension. The maximum possible score on subtests 4 and 5 combined is 30.

2) Test de Rendement en Français (level IV): This is a standardized test developed annually by La Commission des Ecoles Catholiques de Montréal (CECM). It consists of 40 multiple-choice items measuring language skills such as spelling, vocabulary, antonyms, synonyms, conjugation, grammar and comprehension of oral text. Stanine scores are determined in November of each year. Stanine scores were analyzed statistically in the current evaluation.

3) Test de Rendement en Mathématiques (level IV): Again, this test is developed and standardized by the C.E.C.M. each November. It consisted of 35 multiple-choice items. It must be kept in mind that there are differences in the mathematics curricula of the P.S.B.G.M. and the C.E.C.M. and this is probably a contributing factor in the performance of the P.S.B.G.M. students. In the current study stanine scores were analyzed statistically.

4) Listening Comprehension: This test was developed by the Centre Educatif et Culturel Inc. (1969) to classify speakers of French as a second language. In addition to testing listening comprehension skills of an

associative nature (e.g. matching oral descriptions to pictures), it tests the child's ability to interpret spoken material (e.g. pick one of four sentences which best describes what occurred in a short story presented orally). This test was administered to groups of students by means of a tape recorder. The maximum possible score on this test is 37.

5) Oral production: Each student was interviewed individually by a French-speaking woman. In the first part of the interview the child was asked to describe a story presented in the form of a cartoon. Subsequently, he/she was engaged in a short conversation with the interviewer on topics related to the cartoon and to school experiences. The interviews were tape recorded for later analysis.

Because of the complexity of evaluating oral production skills, we were not able to include all of the students in this assessment. A summary of the actual sample signs is presented in Table 2. There was an approximately equal number of boys and girls from each school group.

TABLE 2

SAMPLE SIZES FOR ORAL PRODUCTION EVALUATION

IMMERSION	WESTMOUNT PARK	ENGLISH CONTROL	FRENCH CONTROL
16	15	12	11

Each speech sample was rated by two native-French speaking people along 5 dimensions: compréhension aurale, prononciation, grammaire, vocabulaire, and communication. The dimension of communication was intended to assess fluency of communication between the student and the interviewer. The ratings ranged from 5, indicating native-like or excellent skill, to 1, indicating very poor skill. The speech samples were presented in random order so that the raters did not know in which language program the speaker belonged. Each rater made independent judgements. The ratings from both raters were then averaged to form a single score for each student on each dimension.

RESULTS

English language tests

Separate one-way analyses of variance were carried out on the scores from the following tests: word knowledge, reading, mathematics and writing evaluation (spelling, sentence accuracy, sentence complexity & variety, organization, originality, and overall). The main variable was School group (Immersion, English Control, Westmount Park). The ratings for length, punctuation, and vocabulary of the writing evaluation were not analyzed statistically; there were insufficient numbers of response categories to justify formal statistical analyses. Instead, we calculated a percentage frequency score for each category of each dimension.

A summary of the English language test results and analyses is presented in Table 3.

TABLE 3

Summary of English Language Test Results

	Immersion	Westmount Park	English Control	F Ratio	df
Metropolitan Ach.Tests:					
Word Knowledge	75.57	78.77	74.83	1.05	2,59
Reading	79.01	75.55	76.08	.50	2,59
Mathematics	86.42	78.14	82.54	3.35*	2,59
Writing Skills:					
Spelling	3.02	3.63	3.33	2.46	2,34
Sentence Accuracy	2.39	2.57	2.35	.33	2,10
Sentence Complexity	2.39	2.35	2.33	.03	2,18
Organization	2.50	2.70	2.35	.78	2,8
Originality	2.00	2.28	2.04	.90	2,8
Overall	2.47	2.59	2.27	.59	2,16
Punctuation:					
Appropriate	83%	52%	61%		
Inappropriate	17%	48%	39%		
Length:					
Appropriate	70%	64%	49%		
Inappropriate	30%	36%	51%		
Vocabulary:					
Superior;	11%	7%	7%		
Average	84%	80%	80%		
Below Average	5%	13%	13%		

*p<.05

There were no statistically significant differences among the School groups on the word knowledge and reading sub tests of the M.A.T. - - all groups performed at the same level.

There was a statistically significant difference among the groups on the mathematics sub test - - the Westmount Park group ($\bar{X}$= 78.14)[1]. scored lower than the English Control group ($\bar{X}$= 82.54)and the Immersion group ($\bar{X}$= 86.42).

There were no statistically significant differences among the groups on the 6 dimensions of the writing evaluation that were analyzed statistically - - spelling, sentence accuracy, sentence complexity & variety, organization, originality, and overall. All groups were rated in the 2 to 3 range indicating that their writing skills were commensurate with a grade 4 level or somewhat below grade 4 level.

The percentage frequency scores of the Westmount Park group on punctuation, length, and vocabulary were compared to the corresponding scores for the entire original Immersion and English Control groups. The original Immersion and English Control groups consisted of an equal number of below average, average, and above average students; the Westmount Park group consisted only of average students. Unfortunately, the scores for only the average Immersion and English Control students were not available so that the entire samples were included in these comparisons. This descripancy in sample make-up must be kept in mind in the following discussion of the results.

On punctuation, the Westmount Park group (52% appropriate) tended to score lower than the English Control group (61% appropriate) who in turn scored

1. $\bar{X}$ = average score

lower than the Immersion group (83% appropriate).

On length, the Westmount Park group (64% appropriate) was rated higher than the English Control group (49% appropriate) but somewhat lower than the Immersion group (70% appropriate).

On vocabulary, the Westmount Park and English Control groups were rated identically (7% superior; 80% average) while the Immersion group was rated somewhat higher (11% superior; 84% average).

French Language Tests

Separate analyses of variance were carried out on the following scores: Test de Lecture (vocabulaire, compréhension), Test de Rendement en Français, Test de Rendement en Mathématiques, compréhension aurale (group), and production orale (compréhension orale, prononciation, grammaire, vocabulaire, communication). The main variable was School Group (Immersion, Westmount Park, English Control, French Control). A summary of these results is presented in Table 4. For a graphic presentation of individual comparisons see Appendix B.

There were significant differences among the School Groups on the Test de Lecture. On the vocabulaire subtest, the Westmount Park group ($\bar{X}$= 33.27) scored significantly lower than the Immersion group ($\bar{X}$= 37.29) and the French Control group ($\bar{X}$= 42.07). There was no statistically significant difference between the Westmount Park group ($\bar{X}$= 33.27) and the English Control group ($\bar{X}$= 30.50). On the compréhension subtest, the Westmount Park group ($\bar{X}$= 9.72) scored significantly lower than the Immersion group ($\bar{X}$= 14.21) and the French Control group ($\bar{X}$= 14.48). There was no statistically significant difference between the Westmount Park group ($\bar{X}$= 9.72) and the English Control group ($\bar{X}$=9.46).

TABLE 4

Summary of French Language Test Results

	Immersion	Westmount Park	English Control	French Control	F Ratio	df
Test de Lecture:						
Vocabulaire	37.29	33.27	30.50	42.07	19.86***	3,74
Compréhension	14.21	9.72	9.46	14.48	12.90***	3,74
Test de Rendement en Français (IV)	4.69	1.53	1.33	6.89	115.75***	3,73
Test de Rendement en Mathématiques (IV)	5.70	2.89	2.13	4.90	29.88***	3,75
Compréhension aurale (group)	30.11	16.18	16.71	31.39	122.13***	3,78
Production Orale:						
Compréhension aurale	4.97	2.41	3.58	5.00	25.77***	3,23
Prononciation	4.09	2.72	3.83	4.90	22.53***	3,41
Grammaire	4.50	1.77	3.00	4.90	22.97***	3,43
Vocabulaire	4.84	2.00	2.88	5.00	24.23***	3,10
Communication	4.63	2.27	3.38	4.87	46.83***	3,15

*** $p < .001$

The Immersion group scored significantly lower than the French Control group on the vocabulaire subtest but there was no significant difference between them on the compréhension subtest. The Immersion group scored significantly higher than the English Control group on both subtests.

There were significant differences among the School groups on the Test de Rendement - - en Français and en Mathématiques. The pattern of results was the same on both subtests - - the Westmount Park group scored significantly lower than the Immersion and the French Control groups; there was no significant difference between the Westmount Park group and the English Control group.

The Immersion group scored significantly lower than the French Control group on the Français subtest but significantly higher than the French Control group on the Mathématiques subtest.

There was a significant difference among the School groups on the group test of compréhension aurale - - again, the Westmount Park group scored significantly lower than both the Immersion and French Control groups but not significantly different from the English Control group.

There was no significant difference between the Immersion group and French Control group on this test.

There were significant differences among the School groups on all scales of the oral production evaluation - - compréhension aurale, prononciation, grammaire, vocabulaire, and communication. In every case, the Westmount Park group scored significantly lower than the Immersion group and the French Control group. There were no significant differences between the Westmount

Park group and the English Control group on any of the scales except communication; in this case, the English Control group ($\bar{X}$= 3.38) was rated higher than the Westmount Park group ($\bar{X}$= 2.27).

There were no significant differences between the Immersion group and the French Control group on any of the 5 scales.

SUMMARY AND CONCLUSIONS

The results from this evaluation indicate

1) there were no major differences between the Westmount Park group and the English Control or Immersion groups on the tests of English language skills;

2) the Westmount Park groups scored significantly lower than the English Control and Immersion groups on the English Mathematics test;

3) the Westmount Park group scored significantly lower than the Immersion and French Control groups on all tests in the French language battery;

4) there were no significant differences between the Westmount Park group and the English Control group on any of the French tests except on the communication scale of the oral production evaluation - - the English Control group was rated higher;

5) the Immersion group scored at the same level as the French Control group on all of the oral production scales, on French reading comprehension and

on listening comprehension;

In conclusion, the results from this evaluation suggest that the Westmount Park students have not achieved any special benefits in the area of French language acquisition as a result of their participation in the enriched French program in that school.

It is generally found that students mastery of second language skills in enriched FSL programs is related to the amount of class time spent in the second language. The current results do not corroborate this tendency. Research studying the relationship between class time and acquisition of content material has not always found that the two are positively related (e.g., see Husén, 1972). Furthermore, there may be a critical duration below which variations of duration do not alter second language acquisition significantly. Finally, it may also be that the curricular variations which seem to have characterized this particular program have "washed out" second language gains which a more systematic program might have produced. The exact reason for the lack of differential between the Westmount group with its "enriched" program and the English Control group with its regular FSL program is not apparent. Additional research in this program might clarify this question. A more extensive, although less intensive, evaluation of the Westmount Park program is planned for 1975-76.

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APPENDIX A

CLASS SIZES AT WESTMOUNT PARK SCHOOL *

- as of September 1974, 1975 -

	1974	1975
K. English	22 (1)	19 (1)
French	25 (1)	22 (1)
Grade 1	62 (2)	68 (2)
2	70 (2)	71 (2)
3	56 (2)	70 (2)
4	62 (2)	62 (2)
5	49 (2)	71 (2½)
6	71 (2)	56 (1½)

* numbers in brackets indicate number of classes.

APPENDIX B [1].

SUMMARY OF NEWMAN-KEULS TEST

Results--French Language Tests

Test de Lecture:

a) Vocabulaire:

Immersion	Westmount Park	English Control	French Control
37.29	33.27	30.50	42.07

b) Compréhension:

Immersion	Westmount Park	English Control	French Control
14.21	9.72	9.46	14.48

Tests de Rendement:

a) Français:

Immersion	Westmount Park	English Control	French Control
4.69	1.53	1.33	6.89

b) Mathématiques:

Immersion	Westmount Park	English Control	French Control
5.70	2.89	2.13	4.90

1. Groups which are joined by a line differ significantly from one another. Example, Test de Lecture (vocabulaire): English Control scored significantly lower than the French Controls.

Compréhension aurale (groupe):

Immersion	Westmount Park	English Control	French Control
30.10	16.18	16.17	31.39

Production orale:

a) Compréhension aurale:

Immersion	Westmount Park	English Control	French Control
4.97	2.41	3.58	5.00

b) Prononciation:

Immersion	Westmount Park	English Control	French Control
4.09	2.73	3.83	4.90

c) Grammaire:

Immersion	Westmount Park	English Control	French Control
4.50	1.77	3.00	4.90

d) Vocabulaire:

Immersion	Westmount Park	English Control	French Control
4.84	2.00	2.88	5.00

e) Communication:

Immersion	Westmount Park	English Control	French Control
4.63	2.27	3.38	4.87